

=> d hist full

(FILE 'HOME' ENTERED AT 15:38:23 ON 19 APR 2006)

FILE 'REGISTRY' ENTERED AT 15:38:33 ON 19 APR 2006

L1 1 SEA ABB=ON PLU=ON 156681-44-6/RN
 SET LINE 250
 SET DETAIL OFF
 SET NOTICE 1 DISPLAY
 SET LINE LOGIN
 SET DETAIL LOGIN
 DIS L1 1 SQIDE
 SET NOTICE LOGIN DISPLAY

FILE 'BIOSIS, BIOTECHNO, CA, CAPLUS' ENTERED AT 15:40:16 ON 19 APR 2006

FILE 'REGISTRY' ENTERED AT 15:40:24 ON 19 APR 2006

L2 SET SMARTSELECT ON
 SEL PLU=ON L1 1- CHEM : 4 TERMS
 SET SMARTSELECT OFF

FILE 'BIOSIS, BIOTECHNO, CA, CAPLUS' ENTERED AT 15:40:25 ON 19 APR 2006

L3 392 SEA ABB=ON PLU=ON L2
L4 57 SEA ABB=ON PLU=ON L3 (S) (BILE (3A) ACID OR PHYTANIC OR
 PRISTANIC OR TRIMETHYLUNDECANOIC)
L5 27 SEA ABB=ON PLU=ON L4 AND (MEASUR? OR QUANTI? OR ACTIVIT? OR
 AMOUNT)
L6 12 DUP REM L5 (15 DUPLICATES REMOVED)
 D L6 IBIB ABS 1-12

FILE HOME

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN
RN 156681-44-6 REGISTRY
CN Racemase, α -methylacyl coenzyme A (9CI) (CA INDEX NAME)
OTHER NAMES:
CN α -Methylacyl CoA racemase
CN α -Methylacyl-CoA racemase
CN 2-Methylacyl-CoA racemase
MF Unspecified
CI MAN
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, CIN, EMBASE, TOXCENTER, USPATFULL
DT.CA Caplus document type: Conference; Dissertation; Journal; Patent
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);
PREP (Preparation); PRP (Properties); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological
study); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP
(Properties); USES (Uses)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
99 REFERENCES IN FILE CA (1907 TO DATE)
100 REFERENCES IN FILE CAPLUS (1907 TO DATE)



Mark a special word or phrase in this record:

Mark

All organisms
 Homo sapiens
 Mus musculus
 Mycobacterium tuberculosis
 Rattus norvegicus

Select one or more organisms in this record:

Submit

EC NUMBER COMMENTARY

5.1.99.4

Pathway KEGG Link

No entries in this field

RECOMMENDED NAME

GeneOntology No.

alpha-Methylacyl-CoA racemase 8111

SYSTEMATIC NAME

2-Methylacyl-CoA 2-epimerase

SYNONYMS

2-arylpropionyl-CoA epimerase

2-methylacyl-CoA racemase

alpha-Methylacyl CoA racemase

GenBank U89905-derived protein GI2145184

GenBank U89906-derived protein GI 2145186

Racemase, alpha-methylacyl coenzyme A

Racemase, alpha-methylacyl coenzyme A (Mus musculus clone 3)

Racemase, alpha-methylacyl coenzyme A (Rattus norvegicus clone 11)

ORGANISM COMMENTARY LITERATURE

ORGANISM	COMMENTARY	LITERATURE
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

CAS REGISTRY
NUMBER

COMMENTARY

156681-44-6

197731-71-8

racemase, alpha-methylacyl coenzyme A (Mus musculus clone 3) /genBank U89906-derived protein GI 2145186

197731-72-9

racemase, alpha-methylacyl coenzyme A (Rattus norvegicus clone 11) /genBank U89905-derived protein GI2145184

REACTION

COMMENTARY ORGANISM LITERATURE

(2S)-2-Methylacyl-CoA = (2R)-2-methylacyl-CoA

- - -



REACTION TYPE ORGANISM COMMENTARY LITERATURE

Racemization













- - -

ORGANISM

COMMENTARY LITERATURE

SEQUENCE CODE

Homo sapiens	-	2447 , 2449	-
Mus musculus	-	2448	-
Mycobacterium tuberculosis	-	649225	-
Rattus norvegicus	-	2446 , 2447 , 2448 , 2449 , 649732	-

SUBSTRATE	PRODUCT	REACTION DIAGRAM	ORGANISM	COMMENTARY/ Substrate r:=reversible ir:=irreversible	LITERATURE/ Substrate	COMI Prodi
(S)-2-Methylmyristoyl-CoA	(R)-2-Methylmyristoyl-CoA		Rattus norvegicus	r	2446	
(S)-2-Methyltetradecanoyl-CoA	(R)-2-Methyltetradecanoyl-CoA		Homo sapiens	r	2447	
(S)-Pristanoyl-CoA	(R)-Pristanoyl-CoA		Homo sapiens	-	2447	
(S)-Pristanoyl-CoA	(R)-Pristanoyl-CoA		Rattus norvegicus	r	2446	
(S)-Pristanoyl-CoA	(R)-Pristanoyl-CoA		Rattus norvegicus	r	2447	
(S)-Trihydroxycoprostanoyl-CoA	(R)-Trihydroxycoprostanoyl-CoA		Homo sapiens	-	2447	
(S)-Trihydroxycoprostanoyl-CoA	(R)-Trihydroxycoprostanoyl-CoA		Rattus norvegicus	-	2447	
(S)-Trihydroxycoprostanoyl-CoA	(R)-Trihydroxycoprostanoyl-CoA		Rattus norvegicus	r	2446	
More	?		Homo sapiens	no activity with free fatty acids	2447	
More	?		Mycobacterium tuberculosis	key enzyme in the metabolism of 2-methyl-branched fatty acids	649225	
More	?		Rattus norvegicus	-	2447	
More	?		Rattus norvegicus	enzyme is involved in the alternative pathway of cholesterol side-chain oxidation. The alternative pathway consists of alpha-methylacyl-CoA racemase, and peroxisomal multifunctional enzyme type 1 (peroxisomal multifunctional 2-enoyl-CoA	649732	

More	?		Rattus norvegicus	hydratase/(S)-3-hydroxyacyl-CoA dehydrogenase) no activity with 3-methyl-branched or linear-chain acyl-CoAs	<u>2446</u>
------	---	---	-------------------	--	-------------

NATURAL SUBSTRATES NATURAL PRODUCTS REACTION DIAGRAM ORGANISM SUBSTRATE COMMENTARY (Substrate) LITERATURE PRODUCT COMMENTARY (Product) LITERATURE (f

No entries in this field

COFACTOR ORGANISM COMMENTARY LITERATURE IMAGE

No entries in this field

METALS and IONS ORGANISM COMMENTARY LITERATURE

No entries in this field

INHIBITORS	ORGANISM	COMMENTARY	LITERATURE	IMAGE
1-Ethyl-3-(3-dimethylaminopropyl)-carbodiimide	Rattus norvegicus	-	<u>2446</u>	● <u>2D-image</u>
2-(4-Isobutylphenyl)propionic acid	Homo sapiens	-	<u>2447</u>	● <u>2D-image</u>
2-(4-Isobutylphenyl)propionic acid	Rattus norvegicus	-	<u>2447</u>	● <u>2D-image</u>
2-(4-Isobutylphenyl)propionic acid	Rattus norvegicus	i.e. ibuprofen, strongest of all competitive inhibitors tested	<u>2446</u>	● <u>2D-image</u>
2-Methylmyristoyl-CoA	Homo sapiens	-	<u>2447</u>	● <u>2D-image</u>
2-Methylmyristoyl-CoA	Rattus norvegicus	-	<u>2447</u>	● <u>2D-image</u>
2-Methylmyristoyl-CoA	Rattus norvegicus	inhibits reaction with 2-pristanoyl-CoA	<u>2446</u>	● <u>2D-image</u>
2-Methyloctanoyl-CoA	Homo sapiens	-	<u>2447</u>	● <u>2D-image</u>
2-Methyloctanoyl-CoA	Rattus norvegicus	-	<u>2447</u>	● <u>2D-image</u>
2-Methyloctanoyl-CoA	Rattus norvegicus	inhibits reaction with 2-pristanoyl-CoA	<u>2446</u>	● <u>2D-image</u>
5,5'-Dithiobis(2-nitrobenzoate)	Rattus norvegicus	inhibition is reversed by incubation of the inactivated enzyme with 10 mM dithiothreitol	<u>2446</u>	● <u>2D-image</u>
Cu ²⁺	Rattus norvegicus	-	<u>2446</u>	● <u>2D-image</u>
Diethylpyrocarbonate	Rattus norvegicus	-	<u>2446</u>	● <u>2D-image</u>
Diisopropylphosphofluoridate	Rattus norvegicus	-	<u>2446</u>	● <u>2D-image</u>
Fe ²⁺	Rattus norvegicus	slight inhibition	<u>2446</u>	● <u>2D-image</u>
Hg ²⁺	Rattus	-	<u>2446</u>	● <u>2D-</u>

	norvegicus			image
More	Rattus norvegicus	no inhibition by iodoacetamide	2446	-
NEM	Rattus norvegicus	weak	2446	● 2D-image
Palmitoyl-CoA	Homo sapiens	inhibition is caused by the formation of stable mixed micelles	2447	● 2D-image
Palmitoyl-CoA	Rattus norvegicus	-	2447	● 2D-image
Palmitoyl-CoA	Rattus norvegicus	stimulates at low concentrations, inhibits above 0.1 mM	2446	● 2D-image
thimerosal	Rattus norvegicus	slight	2446	● 2D-image

ACTIVATING COMPOUND	ORGANISM	COMMENTARY	LITERATURE	IMAGE
Palmitoyl-CoA	Rattus norvegicus	stimulates at low concentrations, inhibits above 0.1 mM	2446	● 2D-image

KM VALUE [mM]	KM VALUE [mM] Maximum	SUBSTRATE	ORGANISM	COMMENTARY	LITERATURE	IMAGE
0.076	-	pristanoyl-CoA	Rattus norvegicus	-	2446	● 2D-image
0.172	-	pristanoyl-CoA	Homo sapiens	-	2447	● 2D-image
0.0316	-	Trihydroxycoprostanoyl-CoA	Homo sapiens	-	2447	● 2D-image
0.06	-	Trihydroxycoprostanoyl-CoA	Rattus norvegicus	-	2446	● 2D-image

Ki VALUE [mM] Ki VALUE [mM] Maximum INHIBITOR ORGANISM COMMENTARY LITERATURE IMAGE
No entries in this field

TURNOVER NUMBER[1/s] TURNOVER NUMBER MAXIMUM[1/s] SUBSTRATE ORGANISM COMMENTARY LITERATURE IMAGE
No entries in this field

SPECIFIC ACTIVITY [μmol/min/mg]	SPECIFIC ACTIVITY MAXIMUM	ORGANISM	COMMENTARY	LITERATURE
additional information	-	Homo sapiens	development of a coupled assay based on the use of pristanoyl-CoA oxidase/peroxidase	2449
additional information	-	Rattus norvegicus	development of a coupled assay based on the use of pristanoyl-CoA oxidase/peroxidase	2449
additional information	-	Rattus norvegicus	development of a very sensitive and convenient radiometric assay	2446

pH OPTIMUM	pH MAXIMUM	ORGANISM	COMMENTARY	LITERATURE
8	-	Homo sapiens	-	2447
7	-	Rattus norvegicus	trihydroxycoprostanoyl-CoA	2446
6	-	Rattus norvegicus	pristanoyl-CoA	2446

pH RANGE	pH RANGE MAXIMUM	ORGANISM	COMMENTARY	LITERATURE
6.5	9	Homo sapiens	more than 80% of maximal activity between pH 6.5 and pH 9.0, inactive below pH 5	2447

TEMPERATURE OPTIMUM TEMPERATURE OPTIMUM MAXIMUM ORGANISM COMMENTARY LITERATURE

No entries in this field

TEMPERATURE RANGE TEMPERATURE MAXIMUM ORGANISM COMMENTARY LITERATURE

No entries in this field

SOURCE TISSUE	ORGANISM	COMMENTARY	LITERATURE
adrenal gland	Homo sapiens	weak	2449
cerebellum	Homo sapiens	weak	2449
chorionic villus	Homo sapiens	-	2447
fibroblast	Homo sapiens	-	2447
harderian gland	Homo sapiens	-	2449
heart	Homo sapiens	weak	2449
Hep-G2 cell	Homo sapiens	-	2447
intestinal mucosa	Homo sapiens	-	2449
kidney	Homo sapiens	-	2449
liver	Homo sapiens	-	2447 , 2449
liver	Rattus norvegicus	-	2446 , 2447 , 2449
lung	Homo sapiens	weak	2449
muscle	Homo sapiens	weak	2449
pancreas	Homo sapiens	weak	2449
skin fibroblast	Homo sapiens	-	2447
spleen	Homo sapiens	weak	2449
telencephalon	Homo sapiens	weak	2449
testis	Homo sapiens	weak	2449
thymus	Homo sapiens	weak	2449

LOCALIZATION	ORGANISM	COMMENTARY	GeneOntology No.	LITERATURE
mitochondrion	Homo sapiens	only 10-30% of the activity is found in mitochondria	5739	2447
mitochondrion	Rattus norvegicus	co-distributed exclusively with mitochondrial marker enzymes	5739	2447
peroxisome	Rattus norvegicus	-	5777	649732
peroxisome	Rattus norvegicus	bulk activity	5777	2447

ACCESSION CODE	ENTRY NAME	ORGANISM	NO. OF AA	MOLECULAR WEIGHT[Da]	SOURCE	Sequence
Q9UHK6 pBLAST	AMACR_HUMAN	Homo sapiens	382	42360	Swiss-Prot	Show Sequence

Q09174 pBLAST	AMACR_MOUSE	Mus musculus	380	41587	Swiss-Prot	Show Sequence
P70473 pBLAST	AMACR_RAT	Rattus norvegicus	381	41697	Swiss-Prot	Show Sequence
Q4IYP2 pBLAST	Q4IYP2_AZOVI	Azotobacter vinelandii AvOP	397	42454	TrEMBL	Show Sequence
Q4LND9 pBLAST	Q4LND9_9BURK	Burkholderia cenocepacia HI2424	455	49064	TrEMBL	Show Sequence
Q4LQP6 pBLAST	Q4LQP6_9BURK	Burkholderia cenocepacia HI2424	350	36615	TrEMBL	Show Sequence
Q4LWN5 pBLAST	Q4LWN5_9BURK	Burkholderia cenocepacia HI2424	406	43669	TrEMBL	Show Sequence
Q4LXS2 pBLAST	Q4LXS2_9BURK	Burkholderia cenocepacia HI2424	406	43786	TrEMBL	Show Sequence
Q4NIB3 pBLAST	Q4NIB3_9MICC	Arthrobacter sp. FB24	419	45712	TrEMBL	Show Sequence
Q4NR64 pBLAST	Q4NR64_9DELT	Anaeromyxobacter dehalogenans 2CP-C	391	40575	TrEMBL	Show Sequence
Q4AQK8 pBLAST	Q4AQK8_9BURK	Polaromonas sp. JS666	433	45750	TrEMBL	Show Sequence
Q4ASU3 pBLAST	Q4ASU3_9BURK	Polaromonas sp. JS666	407	43920	TrEMBL	Show Sequence
Q4AVI5 pBLAST	Q4AVI5_9BURK	Polaromonas sp. JS666	416	45848	TrEMBL	Show Sequence
Q4B2Y0 pBLAST	Q4B2Y0_9BURK	Polaromonas sp. JS666	407	43807	TrEMBL	Show Sequence
Q4B520 pBLAST	Q4B520_9BURK	Polaromonas sp. JS666	416	44626	TrEMBL	Show Sequence
Q447U6 pBLAST	Q447U6_SOLUS	Solibacter usitatus Ellin6076	403	44029	TrEMBL	Show Sequence
Q422R9 pBLAST	Q422R9_DESHA	Desulfitobacterium hafniense DCB-2	355	39734	TrEMBL	Show Sequence
Q3VZH3 pBLAST	Q3VZH3_9ACTO	Frankia sp. EAN1pec	423	44956	TrEMBL	Show Sequence
Q3VZL8 pBLAST	Q3VZL8_9ACTO	Frankia sp. EAN1pec	379	40254	TrEMBL	Show Sequence
Q3W154 pBLAST	Q3W154_9ACTO	Frankia sp. EAN1pec	378	40088	TrEMBL	Show Sequence
Q3W4K6 pBLAST	Q3W4K6_9ACTO	Frankia sp. EAN1pec	369	39541	TrEMBL	Show Sequence
Q3W562 pBLAST	Q3W562_9ACTO	Frankia sp. EAN1pec	396	43121	TrEMBL	Show Sequence
Q3W5F2 pBLAST	Q3W5F2_9ACTO	Frankia sp. EAN1pec	451	48468	TrEMBL	Show Sequence
Q3WFQ7 pBLAST	Q3WFQ7_9ACTO	Frankia sp. EAN1pec	402	43090	TrEMBL	Show Sequence
Q3WFX1 pBLAST	Q3WFX1_9ACTO	Frankia sp. EAN1pec	389	41842	TrEMBL	Show Sequence
Q3WHJ3 pBLAST	Q3WHJ3_9ACTO	Frankia sp. EAN1pec	462	49208	TrEMBL	Show Sequence
Q3WJ86 pBLAST	Q3WJ86_9ACTO	Frankia sp. EAN1pec	771	81365	TrEMBL	Show Sequence
Q3WTP8	Q3WTP8_9RHIZ	Mesorhizobium sp. BNC1	419	45059	TrEMBL	Show

<u>pBLAST</u>						<u>Sequence</u>
<u>Q3WTR2</u> <u>pBLAST</u>	Q3WTR2_9RHIZ	Mesorhizobium sp. BNC1	364	38783	TrEMBL	⬇ Show Sequence
<u>Q3WXX8</u> <u>pBLAST</u>	Q3WXX8_9RHIZ	Mesorhizobium sp. BNC1	378	40584	TrEMBL	⬇ Show Sequence
<u>Q3X096</u> <u>pBLAST</u>	Q3X096_9ACTN	Rubrobacter xylanophilus DSM 9941	404	44338	TrEMBL	⬇ Show Sequence
<u>Q3X5E1</u> <u>pBLAST</u>	Q3X5E1_9ACTN	Rubrobacter xylanophilus DSM 9941	395	43719	TrEMBL	⬇ Show Sequence
<u>Q3X5K5</u> <u>pBLAST</u>	Q3X5K5_9ACTN	Rubrobacter xylanophilus DSM 9941	414	45231	TrEMBL	⬇ Show Sequence
<u>Q3MVD3</u> <u>pBLAST</u>	Q3MVD3_9DELT	Syntrophobacter fumaroxidans MPOB	391	42948	TrEMBL	⬇ Show Sequence
<u>Q3QQ94</u> <u>pBLAST</u>	Q3QQ94_9RHOB	Silicibacter sp. TM1040	373	40180	TrEMBL	⬇ Show Sequence
<u>Q3QTP0</u> <u>pBLAST</u>	Q3QTP0_9RHOB	Silicibacter sp. TM1040	395	42380	TrEMBL	⬇ Show Sequence
<u>Q3FMR0</u> <u>pBLAST</u>	Q3FMR0_9BURK	Rhodoferrax ferrireducens DSM 15236	362	38569	TrEMBL	⬇ Show Sequence
<u>Q3FP81</u> <u>pBLAST</u>	Q3FP81_9BURK	Rhodoferrax ferrireducens DSM 15236	418	44695	TrEMBL	⬇ Show Sequence
<u>Q3FU66</u> <u>pBLAST</u>	Q3FU66_9BURK	Rhodoferrax ferrireducens DSM 15236	387	41780	TrEMBL	⬇ Show Sequence
<u>Q3GL65</u> <u>pBLAST</u>	Q3GL65_9GAMM	Psychrobacter cryohalolentis K5	352	38399	TrEMBL	⬇ Show Sequence
<u>Q3GNY3</u> <u>pBLAST</u>	Q3GNY3_9GAMM	Psychrobacter cryohalolentis K5	423	45301	TrEMBL	⬇ Show Sequence
<u>Q3K8D2</u> <u>pBLAST</u>	Q3K8D2_PSEFL	Pseudomonas fluorescens PfO-1	393	42243	TrEMBL	⬇ Show Sequence
<u>Q391W0</u> <u>pBLAST</u>	Q391W0_9BURK	Burkholderia sp. 383	388	41422	TrEMBL	⬇ Show Sequence
<u>Q392M2</u> <u>pBLAST</u>	Q392M2_9BURK	Burkholderia sp. 383	381	40921	TrEMBL	⬇ Show Sequence
<u>Q39B91</u> <u>pBLAST</u>	Q39B91_9BURK	Burkholderia sp. 383	350	36647	TrEMBL	⬇ Show Sequence
<u>Q39DK7</u> <u>pBLAST</u>	Q39DK7_9BURK	Burkholderia sp. 383	463	49229	TrEMBL	⬇ Show Sequence
<u>Q39LX9</u> <u>pBLAST</u>	Q39LX9_9BURK	Burkholderia sp. 383	384	40897	TrEMBL	⬇ Show Sequence
<u>Q39MI0</u> <u>pBLAST</u>	Q39MI0_9BURK	Burkholderia sp. 383	388	41225	TrEMBL	⬇ Show Sequence
<u>Q39MT5</u> <u>pBLAST</u>	Q39MT5_9BURK	Burkholderia sp. 383	350	37383	TrEMBL	⬇ Show Sequence
<u>Q39MW4</u> <u>pBLAST</u>	Q39MW4_9BURK	Burkholderia sp. 383	386	41428	TrEMBL	⬇ Show Sequence
<u>Q39N02</u> <u>pBLAST</u>	Q39N02_9BURK	Burkholderia sp. 383	369	38590	TrEMBL	⬇ Show Sequence
<u>Q3CNG3</u> <u>pBLAST</u>	Q3CNG3_ALTAT	Pseudoalteromonas atlantica T6c	386	42619	TrEMBL	⬇ Show Sequence
<u>Q8F1J1</u> <u>pBLAST</u>	Q8F1J1_LEPIN	Leptospira interrogans	390	43625	TrEMBL	⬇ Show Sequence
<u>Q89XH6</u> <u>pBLAST</u>	Q89XH6_BRAJA	Bradyrhizobium japonicum	388	41545	TrEMBL	⬇ Show Sequence

Q06543 pBLAST	Q06543_MYCTU	Mycobacterium tuberculosis	360	38685	TrEMBL	⬇ Show Sequence
Q6FBN2 pBLAST	Q6FBN2_ACIAD	Acinetobacter sp. (strain ADP1)	407	45097	TrEMBL	⬇ Show Sequence
Q6FBN5 pBLAST	Q6FBN5_ACIAD	Acinetobacter sp. (strain ADP1)	405	44587	TrEMBL	⬇ Show Sequence
Q7U0J6 pBLAST	Q7U0J6_MYCBO	Mycobacterium bovis	360	38685	TrEMBL	⬇ Show Sequence
Q8YB25 pBLAST	Q8YB25_BRUME	Brucella melitensis	405	43553	TrEMBL	⬇ Show Sequence
Q8YB81 pBLAST	Q8YB81_BRUME	Brucella melitensis	415	45073	TrEMBL	⬇ Show Sequence

PDB ORGANISM
[1X74, download](#) Mycobacterium tuberculosis

MOLECULAR WEIGHT	MOLECU LR WEIGHT MAXIMUM	ORGANISM	COMMENTARY	LITERATURE
75000	-	Mycobacterium tuberculosis	dynamic light-scattering measurement	649225
47700	-	Homo sapiens	gel filtration	2447
44700	-	Rattus norvegicus	gel filtration	2446

SUBUNITS	ORGANISM	COMMENTARY	LITERATURE
Dimer	Mycobacterium tuberculosis	2 * 39000, SDS-PAGE	649225
Monomer	Homo sapiens	1 * 47100, SDS-PAGE	2447
Monomer	Rattus norvegicus	-	2447
Monomer	Rattus norvegicus	1 * 44900, SDS-PAGE	2446

POSTTRANSLATIONAL MODIFICATION ORGANISM COMMENTARY LITERATURE

No entries in this field

Crystallization/COMMENTARY	ORGANISM	LITERATURE
hanging-drop vapour-diffusion method, the best crystals grow in 1.26 M ammonium phosphate, pH 7.0 using a protein concentration of 24 mg/ml	Mycobacterium tuberculosis	649225

pH STABILITY pH STABILITY MAXIMUM ORGANISM COMMENTARY LITERATURE

No entries in this field

TEMPERATURE STABILITY	TEMPERATURE STABILITY MAXIMUM	ORGANISM	COMMENTARY	LITERATURE
50	-	Homo sapiens	half-life: 15 min	2447
35	40	Homo sapiens	slow loss of activity	2447

GENERAL STABILITY ORGANISM LITERATURE

No entries in this field

ORGANIC SOLVENT ORGANISM COMMENTARY LITERATURE

No entries in this field

OXIDATION STABILITY ORGANISM LITERATURE

No entries in this field

STORAGE STABILITY ORGANISM LITERATURE

No entries in this field

Purification/COMMENTARY	ORGANISM	LITERATURE
-	Homo sapiens	2447
-	Rattus norvegicus	2446 , 2448
-	Mycobacterium tuberculosis	649225

Cloned/COMMENTARY	ORGANISM	LITERATURE
-	Mus musculus	2448
expression in Escherichia coli	Rattus norvegicus	2448

ENGINEERING ORGANISM COMMENTARY LITERATURE

No entries in this field

Renatured/COMMENTARY ORGANISM LITERATURE

No entries in this field

APPLICATION	ORGANISM	COMMENTARY	LITERATURE
medicine	Homo sapiens	the activity of EC 5.1.99.4 may prove to be a valuable parameter for the prenatal diagnosis of general defects of peroxisome biogenesis such as Zellweger syndrome	2447

DISEASE TITLE OF PUBLICATION LINK TO PUBMED

No entries in this field

REF.	AUTHORS	TITLE	JOURNAL	VOL.	PAGES	YEAR	ORGANISM	COMMENTARY	LINK TO PUBMED
2446	Schmitz, W.; Fingerhut, R.; Conzelmann, E.	Purification and properties of an alpha-methylacyl-CoA racemase from rat liver	Eur. J. Biochem.	222	313-323	1994	Rattus norvegicus	c	● PubMed
2447	Schmitz, W.; Albers, C.; Fingerhut, R.; Conzelmann, E.	Purification and characterization of an alpha-methylacyl-CoA racemase from human liver	Eur. J. Biochem.	231	815-822	1995	Homo sapiens, c Rattus norvegicus	c	● PubMed
2448	Schmitz, W.; Helander, H.M.; Hiltunen, J.K.; Conzelmann, E.	Molecular cloning of cDNA species for rat and mouse liver alpha-methylacyl-CoA racemase	Biochem. J.	326	883-889	1997	Mus musculus, c Rattus norvegicus	c	● PubMed
2449	Van	2-Methylacyl	Biochim.	1347	62-68	1997	Homo sapiens, c	.	● PubMed

	Veldhoven, P.P.; Croes, K.; Casteels, M.; Mannaerts, G.P.	racemase: a coupled assay based on the use of pristanoyl-CoA oxidase/peroxidase and reinvestigation of its subcellular distribution in rat and human liver	Biophys. Acta				Rattus norvegicus	
649225	Bhaumik, P.; Kursula, P.; Ratas, V.; Conzelmann, E.; Hiltunen, J.K.; Schmitz, W.; Wierenga, R.K.	Crystallization and preliminary X-ray diffraction studies of an alpha-methylacyl-CoA racemase from Mycobacterium tuberculosis	Acta Crystallogr. Sect. D	59	353-355	2003	Mycobacterium tuberculosis	● PubMed
649732	Cuebas, D.A.; Phillips, C.; Schmitz, W.; Conzelmann, E.; Novikov, D.K.	The role of alpha-methylacyl-CoA racemase in bile acid synthesis	Biochem. J.	363	801-807	2002	Rattus norvegicus	● PubMed

LINKS TO OTHER DATABASES (specific for EC-Number 5.1.99.4)

[ExPASy](#)

[KEGG](#)

NCBI: [PubMed](#), [Protein](#), [Nucleotide](#), [Structure](#), [Genome](#), [OMIM](#), [Domains](#)

[IUBMB Enzyme Nomenclature](#)

[PDB database\(3D structure\)](#)

[PROSITE Database of protein families and domains](#)

SYSTEMS

[Protein Mutant Database](#)

[Structural Classification of Proteins \(SCOP\)](#)

[Protein Structure Classification \(CATH\)](#)

[InterPro \(database of protein families, domains and functional sites\)](#)